# STATE ROUTE 267

# TRANSPORTATION CONCEPT REPORT



CALTRANS DISTRICT 3

March 2001





# **STATE ROUTE 267**

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BY CALTRANS DISTRICT 3

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Acting North Region Environmental & District 3 Planning Division Chief

JØDYŒ. LONERGAN

**Acting District Director** 

4/11/01

DATE

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# TRANSPORTATION CONCEPT REPORT

# INTRODUCTION

# Background:

The Transportation Concept Report (TCR) is a Caltrans long-term planning document that evaluates highway and multi-modal conditions of a given State transportation corridor and establishes a twenty-year planning concept for the corridor. In addition to the twenty-year concept, the TCR also looks at the ultimate transportation concept that examines the corridor's needs beyond the twenty-year planning period. Forecasting beyond a twenty year period is difficult for several reasons, such as unknown changes in future land use zoning (beyond the twenty-year general plan build-out) and unknown funding constraints. Therefore, any concept identified, as "Ultimate" must be considered somewhat speculative and should be used cautiously.

As part of route concept development, the TCR documents the planning strategies of the long-range plans identified by the Regional Transportation Planning Agencies and Metropolitan Transportation Organizations within a given State highway route corridor. As State highway routes often pass through several regional planning agencies' jurisdictions, the TCR, where appropriate, assimilates the regional strategies along with Caltrans strategies and consolidates these strategies into one corridor-specific document.

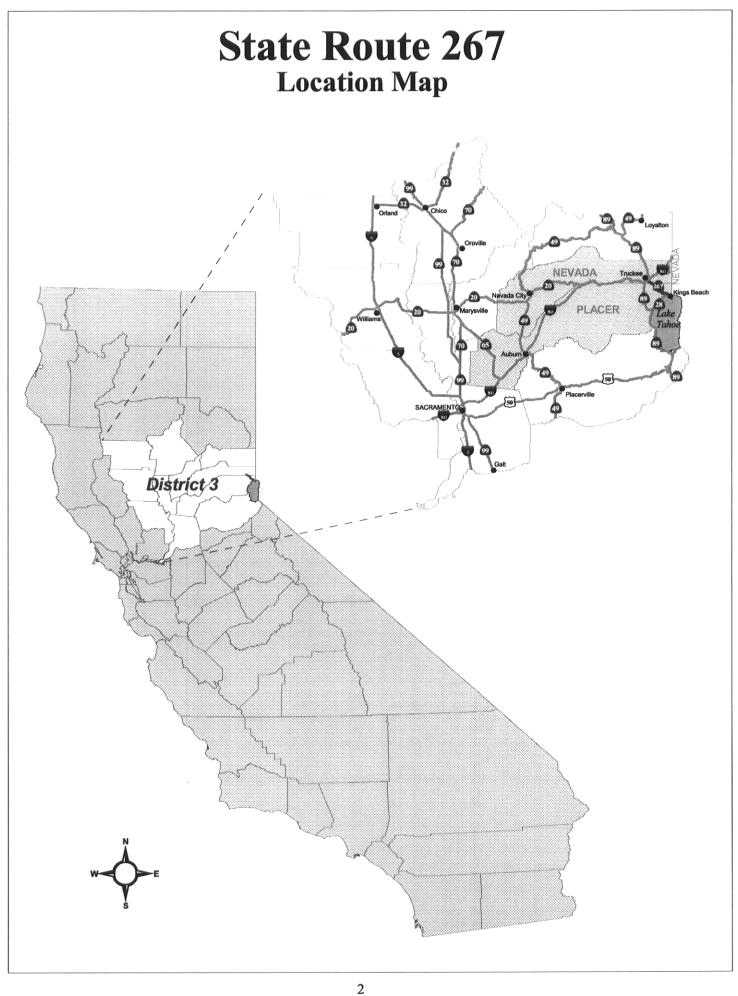
# Format:

The format for the TCR has changed from its previous fully narrative report to a more concise database oriented format. This new format was designed to streamline information to better provide a usable, up-to-date platform allowing for easy computerized access of Caltrans District 3 System Planning information. When completed, the Fact Sheet database will be made available to our transportation planning partners and the public via the Internet.

Included in this format is the California Natural Diversities Database (CNDDB) information, which identifies the status of habitats and species found within 300 meters of centerline of the existing highway facility. This CNDDB information does not represent all environmental constraints within a given corridor. A complete assessment of environmental constraints can only be determined through a detailed environmental study, such as an Environmental Impact Report or Study.

Prepared by:
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# TRANSPORTATION CONCEPT REPORT SUMMARY

# **STATE ROUTE 267**

Table 1 - Concept Summary

							Ultimate
Segment/	Post		Current	Current	Concept	Concept	Transportation
County	Kilometer	Postmile	Facility	LOS	Facility	LOS	Corridor
1/NEV	00.00/04.49	00.00/ 02.79	C-2	E	E-2	D	E-4
2/PLA	00.00/10.73	00.00/06.67	C-2	D	C-2	D	C-4
3/PLA	10.73/15.92	06.67/09.90	C-2	E	C-2	D	C-3

# ROUTE CONCEPT RATIONALE

State Route 267 is a north-south undivided two-lane conventional highway 12.69 miles in length that traverses from I-80 near Truckee in Nevada County to State Route 28 near Kings Beach, Lake Tahoe via North Shore Boulevard in Placer County. State Route 267 traverses southwesterly from I-80 into downtown Truckee. From Truckee, State Route 267 travels southeasterly through rolling terrain progressing into mountainous terrain to an elevation of 7,199 feet at Brockway Summit. From Brockway Summit, the route descends 945 feet into the Tahoe Basin ending at State Route 28 near Kings Beach. The route is of local and regional significance providing access to residential, industrial, commercial and recreational land uses and serves inter-regional, local commuter and recreational traffic traveling between the Tahoe Basin, Martis Valley, Truckee and I-80. Furthermore, SR 267 provides access to the Northstar-At-Tahoe Ski Area and the Truckee-Tahoe Airport and serves as a connecting link between I-80 and the Tahoe Basin.

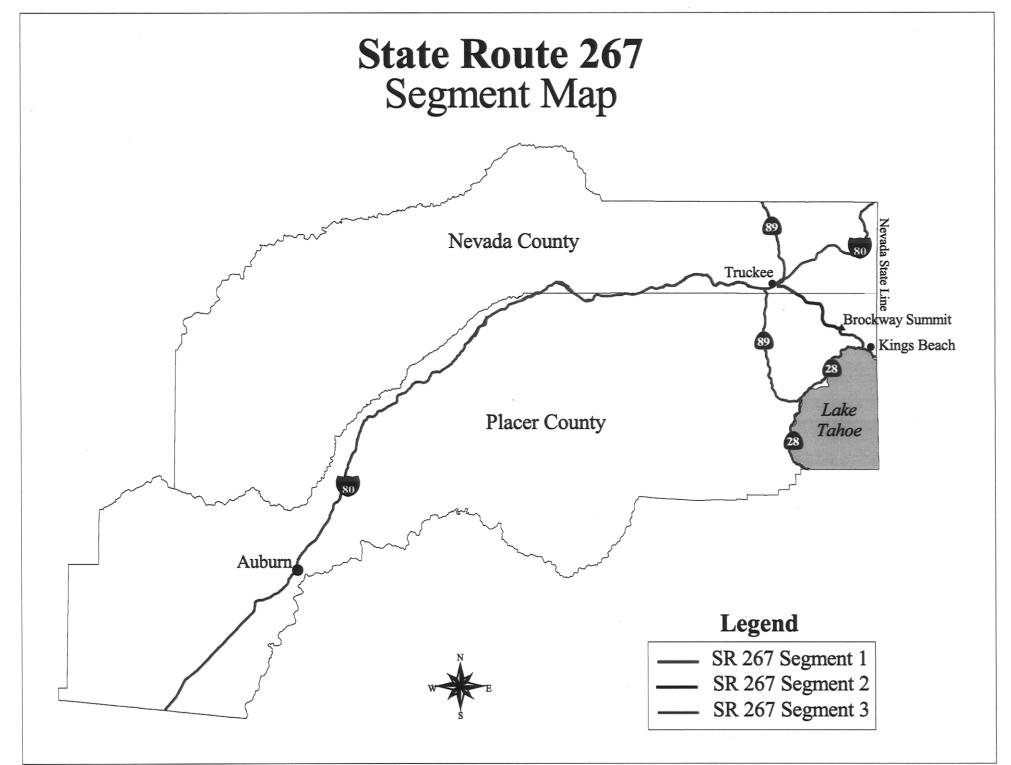
Traffic volumes on State Route 267 are not as high as paralleling State Route 89 from I-80 to north shore Lake Tahoe. However, traffic volumes are projected to increase on State Route 267 due to new commercial and residential developments near the Truckee-Tahoe airport, Northstar-At-Tahoe ski area and various unincorporated locations within the route corridor of Placer County. As development and travel demand increases the following issues need to be addressed within the State Route 267 corridor: traffic congestion, highway capacity, highway geometrics, maintenance, and highway safety.

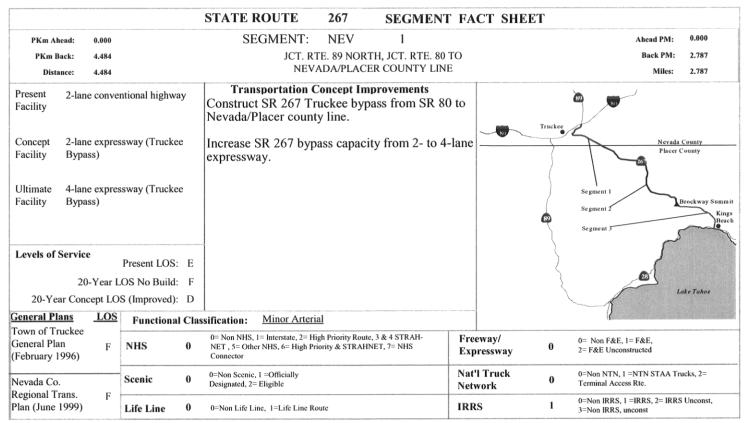
# **Segmentation**

Segment 1 of SR 267 is an undivided two-lane conventional highway that begins at Junction Route 89 North, Junction Route 80 and ends at the Nevada/Place: county line south of historic downtown Truckee. From I-80, SR 267 descends southwesterly into downtown Truckee then turns left on Bridge Street at the Commercial Row/Bridge Street intersection (postmile 0.802). It then traverses southeasterly over the Truckee railroad crossing (PM 0.94) and continues over the Truckee River bridge (PM 0.96). The segment ends in the Martis Valley at the Nevada/Placer county line (PM 2.79). Construction on a two-lane expressway began in August 1999 on a new alignment and right of way, bypassing downtown Truckee. The purpose of the bypass is to reduce traffic congestion and traffic delays, and improve safety on existing SR 267. When the bypass is completed this segmented portion of SR 267 will be deleted from the state highway system and relinquished to the Town of Truckee.

Segment 2 of SR 267 is an undivided two-lane conventional highway beginning at the Nevada/Placer county line and ends at Brockway Summit. From the Nevada/Placer County line, SR 267 traverses southeasterly connecting with the Truckee-Tahoe Airport (PM 0.25) and Northstar-At-Tahoe Ski Area (PM 3.76). State Route 267 continues ascending the mountainous terrain of the Sierra Nevada at a 6.78 % grade and ends at Brockway Summit (PM 6.67, El. 7,179 ft.). Over the next 20 years, this segment will be increasingly impacted by development of adjacent real estate for commercial, recreational and residential uses.

Segment 3 of SR 267 is an undivided two-lane conventional highway beginning at Brockway Summit and ending at SR 28. From Brockway Summit, SR 267 traverses southeasterly descending 945 feet into the Tahoe Basin ending at a 3-way signalized intersection at SR 28 near Kings Beach (PM 9.90). This segment is located in mountainous terrain characterized by numerous horizontal curves and a 6.79% grade which severely impacts the Level of Service (LOS).





**Description - Rationale - General Comments** 

Segment one is an undivided two-lane conventional highway 2.79 miles in length extending from Junction Routes 89N/80, through downtown Truckee, along the developing area of the Martis Valley and ending at the Nevada/Placer County line. The route is located in a rural area entirely within the town limits of Truckee providing access to residential, industrial and commercial land uses serving inter-regional, local commuter and recreational traffic. The route connects the Martis Valley, the Tahoe-Truckee Airport, Northstar-At-Tahoe ski area, and the Tahoe Basin to the downtown Truckee area and I-80.

The primary concern along this segment is the traffic congestion in Truckee, at the multi-way "STOP" sign controlled intersections of Commercial Row/Bridge St./SR 267 and West River St./SR267. The capacity of these intersections are constrained by close spacing between intersections, on-street parking, heavy pedestrian activity, tourist-related traffic (drivers unfamiliar with the area) and an at-grade crossing of the Union Pacific mainline railroad tracks. (Truckee General Plan 1995-2014, Vol. II, p. 9)

The rail serves an Amtrak Station, railroad yard, and acts as a switching yard. Trains crossing SR 267 (PM 0.835) cause long-standing queues blocking nearby intersections upstream of critical approaches and Truckee River Bridge. Thus, response time for emergency vehicles moving between Truckee and areas south of the railroad crossing are seriously impaired. Congestion can be especially severe during holiday and weekend periods throughout the year when recreational traffic in and out of the Tahoe Basin is heavy.

The primary route concept improvement for this segment is to construct a SR 267 Bypass. The first phase of construction for the Bypass began on August 31, 1999 with a project completion date scheduled for spring 2002. The Bypass is intended to reduce traffic congestion and traffic delays, and improve safety along existing SR 267 in downtown Truckee. The Bypass is designed to be a two-lane controlled access highway constructed to expressway standards on new alignment and right of way, and a new interchange at I-80. When the bypass is completed the existing highway in this segment will be deleted from the State Highway system and relinquished to the Town of Truckee.

Although the existing SR 267 will be relinquished to the Town of Truckee, the 1998 Nevada County Regional Transportation Plan identifies projects designed to improve traffic flow and system operations. The following projects are improvement recommendations for existing SR 267; 1) Add a SB right-turn lane at Martis Valley Road; 2) Add a SB left-turn lane at Reynolds Way; 3) Add a NB left-turn lane at Old Brockway Road; 4) Eliminate all on-street parking between South River and West River Streets; 5) Traffic signal construction coordinated with the railroad crossing; 6) Add turn lanes between West River Street and Commercial Row; 7) Install a traffic signal at Commercial Row; 8) Add NB and SB left turn lanes at Church Street; 9) Add a SB left turn lane and a NB right turn lane at Glenshire Drive; 10) Add a southbound refuge lane for left turn traffic from Glenshire Drive; 11) Construct a NB acceleration lane from Glenshire Drive to SR 267; 12) Utilize the right-of-way on the westside of SR 89 immediately north of I-80 as a park-and-ride lot;13) and construct a park-and-ride lot at Hirschdale.

The strategic deployment of Intelligent Transportation System (ITS) technologies such as Road Weather Information Systems (RWIS), Traffic Monitoring Stations (TMS), and Changeable Message Signs (CMS) should be integrated and applied to better manage and control traffic operating conditions.

# Projects Programmed (RTIP/STIP/SHOPP) Projects Listed in Local Long-Range Planning Documents

2000 STIP

Construct 2-lane expressway on new alignment from SR80 to the Nevada/Placer County line (SR 267 Truckee Bypass).

1998/99 SHOPP Install traffic signals at Palisades Road in the Town of Truckee. Project completed in 1999.

1998/99 STIP West River Street intersection Improvments.

### LOCAL PLANNING JURISDICTIONS

RTPA/ MPO

Nevada County Transportation Commission 101 Providence Mind Road, Suite 102 Nevada City, CA 95959

(530) 265-3260

Northern Sierra Air Quality Management District

Air

P.O. Box 2509 Quality Grass Valley, CA 95945

District (530) 274-9360

# Air Ouality

The following information is a brief overview only. For specific environmental information, contact the Caltrans District 3 Environmental Offices.

Air Basin: Mountain Counties

Federal Air Quality Non-Attainment Designations:

C0: Attainment

OZONE: Non-Applicable for 1 hr standard/non-attainment for

PM10: Unclassified

8 br standard

### Land Use

The Town of Truckee is the major population center for eastern Nevada County. In addition to being a hub for rail freight and passenger service. Truckee is at the crossroads of I-80, SR 267 and SR 89. Interstate 80 is a major transcontinental route and SR 267 and SR 89 are the main northern entrances into the Tahoe Basin.

The Downtown Truckee Specific Plan (June 1997) identifies several different zoning designations and combining designations. The existing zoning districts include Public, Office and Professional, Manufacturing and Industrial, Residential (Single and Multiple Family), and Commercial (Neighborhood, Community, and Highway).

According to the Truckee General Plan, aggressive land use growth is expected for downtown Truckee; as a result, traffic will be severely impacted within the downtown area operating in a state of gridlock during peak demand hours. Therefore, capacity is a significant growth barrier in the Truckee area. The construction of the 267 bypass, designed to reroute traffic around downtown Truckee, would help mitigate the additional growth inducing impacts by improving roadway capacity.

# **Modal Options**

Airport: The Truckee-Tahoe Airport is a general aviation airport primarily serving local personal and recreational air traffic. It is located off SR 267 south of Truckee near the Nevada/Placer County Line.

AMTRAK: Modal connections can be made from SR 267 at Commercial Row to the Truckee Intermodal Transportation Center at Commercial Row serving transit, rail, automobiles, trucks, bicycles, and pedestrians. The AMTRAK California Zephyr serves the Oakland to Chicago Corridor with a daily train in each direction through the Town of Truckee.

Truckee Dial-A-Ride: ATM (Area Transit Management) operates a yearly Dial-A-Ride service which is a demand response transportation service available for the elderly and disabled as well as the general public servicing the town of Truckee Monday through Friday 8:00 AM to 5:00 PM.

ATM (Area Transit Management): ATM operates the Truckee Trolley Route on SR 267 which runs November through April making ten routes per day, seven days a week between The Truckee Depot and Northstar-At-Tahoe from 7:00 AM to 5:30 PM. The Truckee Trolley also operates a service April through November making seven runs per day Monday through Saturday between the Truckee-Tahoe Airport and West End Donner Lake from 9:15 Am to 5:15 PM.

Pedestrian & Bikes: Due to the heavy amount of pedestrian activity and mixed land use a comprehensive and safe system of bicycle/pedestrian facilities serving both commuter and recreational purposes should be developed to offer a well-balanced transportation system. All bikeway planning and design should be coordinated with local and regional agencies.

		Highway Lo	g Right of Way	Information			
į	Average Median Width: 0.00 Meter	Average Lane Widths:	3.66 Meters	Average Shoulder Widths:	<u>1.22</u> Meters	No. Lanes:	<u>2</u>
Į	<u>.</u>						

[			Tr	affic Analysis a	and Highw	ay Ir	nformation
<u>Year</u> 2000	<u>AADT</u> 16,800		ourly Volumes	V/C Ratio	LOS E		Traffic Analysis Comments  The traffic analysis is based on a no-build scenario. Future operational conditions will improve to LOS of "B" with the planned STIP SR 267
2010	23,900		2,790	1.30	F		2-lane expressway hypass. Construction began August 1999. Scheduled Project completion date is May 2002.
2020	31,000	3	,600	1.70	F		
Terrain:		Rolling	Land Use:	Comercial / Re	esidential		Future 20-Year Land Use: Commercial / Residential
% Traffic Gro	owth/Yr:	4.6%	Daily Truc	:k %:		<u>4%</u>	Total Accident Rate vs 104% Statewide Average:
Peak Period D	Dir Split:	<u>54%</u>	Peak Perio	d Truck %:		<u>3%</u>	Fatalities + Injuries Acc Rate vs Statewide Avg:

# **Future Right of Way Needs**

Right-of-way has been obtained for the SR 267 bypass. Future right-of-way acquisition will be required in order to expand the SR 267 bypass to the 4-lane ultimate concept as designed by highway standards and specifications.

### References

1998 Traffic Volumes on California State Highways. Caltrans, 1998

1997 Annual Average Daily Truck Traffic on the California State Highway System. Caltrans, 1997

The State Highway Inventory. Caltrans, June 1999.

1997 California State Highway Log District 3. Caltrans, 1997.

State Highway System Subset of 1998 STIP and RTIP/ITIP Augmentation, Caltrans, 1998.

Route Concept and Development Report State Route 267. Caltrans District 3, April 1987.

Regional TransportationPlan. Nevada County Transportation Commission, June 1999

Town of Truckee General Plan 1995-2014 Volume I Goal and Policies. Town of Truckee, February 1996

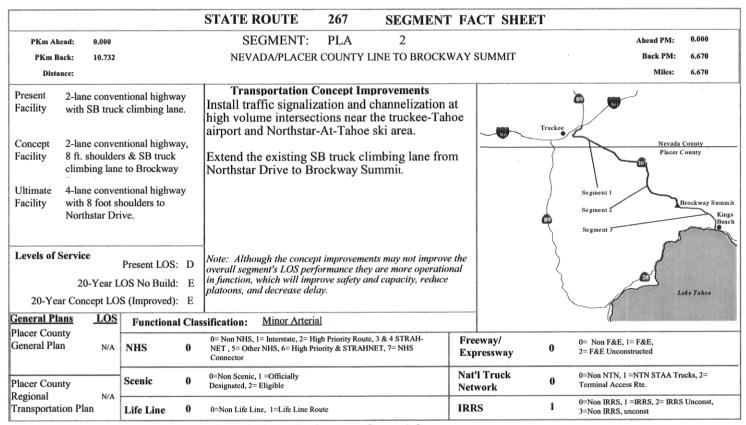
Town of Truckee General Plan 1995-2014 Volume II Final Technical Appendix. Town of Truckee, February 1996

Town of Truckee General Plan 1995-2014 Volume III Economic, Demograpghic and Fiscal Analysis. Town of Truckee, February 1996 Town of Truckee General Plan 1995-2014 Volume IV Economic, Final Environmental Impact Report. Town of Truckee, February 1996

Downtown Truckee Specific Plan Volume 4: Draft EIR. Town of Truckee, June 1997

Statutes Relating to the California Department of Transportation. Caltrans, 1996

Nevada County Regional Trasportation Plan. Nevada County Transportaion Commission, June 1999



**Description - Rationale - General Comments** 

Segment two is an undivided two-lane conventional highway 6.67 miles in length extending from the Nevada/Placer County line near the Truckee Airport to Brockway Summit. The segment is located in a rural area outside of any city limits. The segment provides access to commercial, industrial and residential land uses serving both regional and local traffic and recreational access to and from the Northstar-At-Tahoe recreation area and the Tahoe Basin.

From the Nevada/Placer county line, SR 267 intersects with Truckee-Tahoe Airport/Schaeffer Mill Road (PM 2.50). SR 267 then intersects North Star Drive (PM 3.76). An existing southbound truck-climbing lane (PM 6.09 to PM 6.32) ends 0.35 miles before the Brockway Summit (PM 6.67). Martis Peak Road intersects SR 267 at postmile 6.23 within the climbing lane section.

The Truckee-Tahoe Airport/Schaeffer Mill Road is a high volume intersection with substantial future demand. Mixed land uses of business, light industrial and residential impact the segment. Peak hour volumes north of the intersection are roughly 1,500 with a LOS of "E". South of the intersection, peak hour volumes are approximately 860 with a LOS of "D". Planned developments include a new business office/warehouse complex and a 74-home/golf course extension to the Lahontan residential development. Signalization will help control cross street delays and aid emergency vehicle access to and from the Martis Valley Fire Station, which is a shared facility between the Truckee Fire District and the California Department of Forestry.

Northstar-At-Tahoe, a major year-round recreational attraction, experiences seasonal fluctuations in the traffic demand that peak during winter months. Left-turn channelization is in place for northbound traffic entering Northstar Drive; however, right-turn channelization is unavailable for southbound traffic. Because the intersection experiences substantial demand, congestion and delay are common occurrences.

The short-term route concept improvement is to add right-turn channelization for southbound traffic. A mid-term route concept improvement is to add traffic signalization with left- and right-turn channelization at all approaches, which will improve the safety and efficiency of the intersection and maintain through lane capacity. All turning lanes should provide enough storage for queued vehicles without disrupting other flows. An additional route concept improvement in this vicinity is to relocate the present chain control point away from Northstar Drive. This would speed up chain on/off time, improve the safety and efficiency of the intersection, and help maintain through lane capacity. Further analysis is needed to determine a suitable location for a chain control point area.

An existing southbound truck-climbing lane from postmile 6.09 to 6.32 on a 9% grade provides for slow-moving vehicles. However, the climbing lane ends 0.35 miles short of Brockway Summit resulting in vehicle crawl speeds which reduce capacity and service flow rates and creates operational difficulties.

The route concept improvement is to extend the truck-climbing lane from Northstar Drive to Brockway Summit and widen the shoulders from 4 to 8 feet. These operational improvements will relieve backups, improve traffic safety and operating capabilities, and give passenger vehicles in the traffic stream opportunities to pass slow-moving heavy vehicles. The ultimate concept is a four-lane conventional highway connecting the four-lane Truckee Bypass (segment one) to Northstar Drive.

The strategic deployment of Intelligent Transportation System (ITS) technologies such as Road Weather Information Systems (RWIS), Traffic Monitoring Stations (TMS), and Changeable Message Signs (CMS) should be integrated and applied to better manage and control traffic operating conditions.

# Projects Programmed (RTIP/STIP/SHOPP) Projects Listed in Local Long-Range Planning Documents

97/98 SHOPP Shoulder Repair at various locations from 2.5 miles so. of the Nevada County line to 1.9 miles so. of NorthStar Drive.

## LOCAL PLANNING JURISDICTIONS

RTPA/ MPO

Placer County Transportation Commission 550 High Street, Suite 107 Auburn, CA 95603 (530) 265-3260

Northern Sierra Air Quality Management District P.O. Box 2509,

Air P.O. Box 2509, Quality Grass Valley, CA 95945 District (530) 274-9360

# Air Quality

The following information is a brief overview only. For specific environmental information, contact the Caltrans District 3 Environmental Offices.

Air Basin: Mountain Counties

# Federal Air Quality Non-Attainment Designations:

C0: Attainment

OZONE: Non-Applicable for 1 hr standard/non-attainment for 8 hr standard

### Land Use

A new fire station is being constructed in the immediate vicinity of the Truckee-Tahoe Airport. The fire station will be located within Nevada County; however, access to and from the fire station is located in Placer County. Existing land use developments on the Placer County side include the addition of a 460 home site and golf course to the Lahontan residential development and the 3,000 plus acreage addition at Northstar -At-Tahoe recreation area which consists of a small village for local residents and recreational visitors. The remaining land use within the segment is unimproved.

Proposed land use developments within the segment are currently in the early stages of the County Commission's review process and include: 1) Town and Country Business Center is a proposed office-warehouse facility with three buildings and three separate leases. The complex will be located approximately 1/2 mile northeast of SR 267 off Truckee-Tahoe Airport Rd. Other than airport property, the current land use for this portion of the segment is undeveloped; 2) A proposed residential development called Lahontan II will expand the existing Lahontan residential development by 74 additional home sites and one (possibly two) golf courses. The proposed development will be located approximately 3/4 of a mile southwest of the SR 267/Schaffer Mill Road intersection; 3) The Northstar-At-Tahoe recreation area, offers winter skiing and summer recreational activities. Continuing development of this residential and recreational area is expected.

It is uncertain at this early stage to know whether or not these proposed projects will be fully implemented. However, it is inevitable that over the next 20 years, additional commercial and residential development will occur within the SR 267 corridor, increasing travel demand and impacting the level of service.

# **Modal Options**

Airport: The Truckee-Tahoe Airport is located off SR 267 near the Nevada/Placer County Line. It is a general aviation airport serving local personnel and recreational air traffic. According to the Truckee Tahoe Airport District Master Plan Update, facility improvements will be made when demand warrants. These improvements would not have a significant impact on the transportation system.

ATM (Area Transit Management): ATM operates two busing routes on SR 267, the Kings Beach Route and the Truckee Trolley Route. The Kings Beach Route operates November through April making ten runs per day, seven days a week between The Tahoe Sands Resort and Northstar-At-Tahoe from 7:00 AM to 5:30 PM. The Truckee Trolley operates November through April making ten routes per day, seven days a week between The Truckee Depot and Northstar-At-Tahoe from 7:00 AM to 5:30 PM. The Truckee Trolley also operates a service April through November making seven runs per day Monday through Saturday between the Truckee-Tahoe Airport and West End Donner Lake from 9:15 AM to 5:15 PM.

Northstar/Northshore Shuttle: The Northstar/Northshore Shuttle is operated by Northstar-At-Tahoe and provides service November through April between The Hyatt at Incline Village and Northstar-At-Tahoe. Service begins at The Hyatt at Incline Village at 8:00 AM and ends at Northstar-at-Tahoe at 8:40 AM with a return trip from 4:30 to 5:10 PM.

Pedestrian & Bikes: Bicycle and pedestrian activity is limited due to the dispersed pattern of land use in this area. However, the connectivity of pedestrian and bicycle facilities should be coordinated with local and regional agencies.

	Highway Log	Right of Way	Information			
Average Median Width: <u>0.00</u> Meters	Average Lane Widths:	3.66 Meters	Average Shoulder Widths:	1.22 Meters	No. Lanes:	<u>2</u>

			Tı	affic Analysis a	nd Highw	ay Ir	nformation
Year         AADT           2000         9,500		ourly Volumes 860	<u>V/C Ratio</u> 0.44	LOS D		Traffic Analysis Comments	
2010	13,200	1	,200	0.57	Е		
2020	16,900	1	,500	0.73	Е		
Terrain:	Rol	lling /	Land Use:	Resource Protectio	n / Urban		Future 20-Year Land Use: Resource Protection/urban
% Traffic Growth/Yr: 4.3% Da			Daily Truck %: 49			<u>4%</u>	Total Accident Rate vs 101% Statewide Average:
Peak Period Dir Split: 60%			Peak Perio	od Truck %:		3%	Fatalities + Injuries Acc Rate vs Statewide Avg:

# Future Right of Way Needs

Adequate right-of-way width should be reserved in order to accommodate intersection design standards for separate turning lanes at the Truckee-Tahoe Airport/Schaeffer Mill Road intersection (PM 0.25), and at Northstar Drive (PM 3.76).

Acquisition of property should be reserved so that the existing 4-foot shoulders can be increased to 8 feet. Right of way should be set aside in order to extend the existing truck-climbing lane to Brockway Summit. Right of way preservation should be considered for the purpose of accommodating the ultimate concept facility of a four-lane conventional highway.

# References

Route Concept and Development Report State Route 267, Caltrans April 1987

1997 California State Highway Log District 3, Caltrans

Statutes Relating to the California Department of Trasportation, Caltrans, 1996

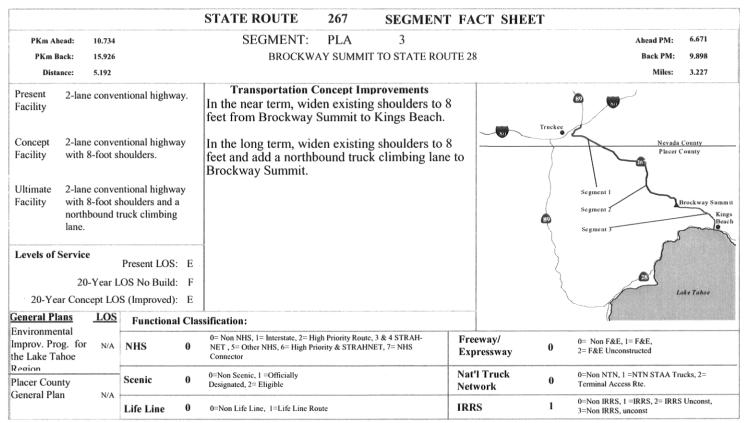
State Highway Inventory, Caltrans, June 1999

Placer County General Plan, Placer County, August 1994

Placer County Regional Transportation Plan, Placer County, January 1994.

California Department of Transportation, District 3. September 1999. Project Scope Summary Report (Pavement Rehabilitation) on Route 267 in Placer County.

Truckee Tahoe Airport Master Plan, Coffman Associates, August 2000



**Description - Rationale - General Comments** 

Segment three traverses southeasterly on an undivided two-lane conventional highway 3.23 miles in length. The segment begins at Brockway Summit (El. 7,179 ft.) and descends 945 feet at a 6.79 % grade into the Tahoe Basin and ends at a three-way signalized intersection at State Route 28 in Kings Beach. The route provides access to commercial and residential land uses serving both regional and local traffic. This particular segment is primarily used for recreational access to and from the Tahoe Basin.

The segment crosses over mountainous terrain containing numerous horizontal curves. The combination of a 6.79% grade and horizontal alignment impact capacity and service flow rates. The terrain not only affects operating capabilities of vehicles, but also restricts the opportunity to pass slow-moving vehicles. The steep sustained uphill grade causes vehicles, particularly trucks, buses, and recreational vehicles, to travel at slow speeds and the absence of passing lanes and inadequate shoulder width on the uphill grade creates long traffic platoons, reduces capacity, affects the level of service and increases delay.

The route concept improvement on this segment consists of widening the shoulders to 8 feet from Brockway Summit to SR 28 near Kings Beach. During winter months heavy snow can be expected; therefore, the increased shoulder width would provide additional snow removal storage on the highway. In non-winter months, the additional shoulder width will provide emergency parking and allow slower moving vehicles temporary use of the shoulder to permit faster vehicles the opportunity to pass. This concept improvement would increase roadway safety, disperse traffic platoons and reduce delay. Although this segment is located inside the jurisdiction of the Tahoe Basin moratorium on highway construction, this type of project would not impede the Tahoe Basin moratorium on capacity improvements.

The ultimate concept improvement is to construct a truck-climbing lane in the northbound direction of SR 267 over Brockway Summit. Support for this concept is referenced in the Regional Transportation Plan - Air Quality Plan for the Lake Tahoe Region (Reaffirmed Dec. 1994).

Although left-turn pockets were constructed in 1999, further channelization and signalization improvements to the SR 267/28 intersection would provide capacity for peak period traffic demand and reduce operational conflicts among vehicles, pedestrians, and bicyclists. Support for this concept is referenced in the Environmental Improvement Program for the Lake Tahoe Region (February 1998), the Draft North Tahoe Community Plans (October 1994), and the Regional Transportation Plan - Air Quality Plan for the Lake Tahoe Region (Dec 1994). A "Minor A" project is proposed to modify the signalization.

The strategic deployment of Intelligent Transportation System (ITS) technologies such as Road Weather Information Systems (RWIS), Traffic Monitoring Stations (TMS), and Changeable Message Signs (CMS) should be integrated and applied to better manage and control traffic operating conditions.

Transportation projects are dictated by the environmental sensitivity of the Tahoe Basin and mandated by the Tahoe EIP (Environmental Improvement Program). Several projects within the Tahoe Basin are associated with the "Environmental Improvement Program" (EIP) which is a management practice to prevent or minimize water quality problems within the Tahoe Basin. These projects include such measures as erosion control, drainage improvements, mitigation plantings, scenic improvements, and the addition of drainage basins.

# Projects Programmed (RTIP/STIP/SHOPP) Projects Listed in Local Long-Range Planning Documents

2002 SHOPP Scenic road #40 Brockway cutoff improvment

98/99 SHOPP Griff Creek - Improve drainage

(PM 8.9/9.8)

99/00 SHOPP Brockway Summit Plantings

01/02

Brockway Summit -Add

2002

SR 28/267 intersection improvments - Improve with

turn lanes to aid traffic flow.

- Mitigation plantings (PM

6.6)

SHOPP

drainage basin (PM 6.7/8.7)

SHOPP

(PM 9.89/9.94)

# LOCAL PLANNING JURISDICTIONS

Tahoe Regional Planning Agency (TRPA)

RTPA/ **MPO** 

P.O. Box 1038 Zephyr Cove, NV 89448

(530) 265-3260

Northern Sierra Air Quality Management District

Air

P.O. Box 2509,

Ouality Grass Valley, CA 95945 District (530) 274-9360

Air Quality

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Federal Air Quality Non-Attainment Designations:

C0: Attainment

OZONE: Non-Applicable for 1 hr standard/non-attainment for PM10: Unclassified

8 hr standard

## Land Use

Land use is undeveloped at the begining of this mountainous segment. As SR 267 descends into the Tahoe Basin in Kings Beach, the land use is primarily residential with some retail and tourist commercial. Recreation facilities include a golf course in the northwest quadrant of SR 267/28.

# **Modal Options**

Northstar/Northshore Shuttle: The Northstar/Northshore Shuttle is operated by Northstar-At-Tahoe and provides service during the winter months of November through April. Service is provided between The Hyatt at Incline Village and Northstar-At-Tahoe. Service begins at The Hyatt at Incline Village at 8:00 AM and ends at Northstar-at-Tahoe at 8:40 AM with a return trip from 4:30 to 5:10 PM. ATM (Area Transit Management): ATM operates two busing routes on SR 267, they include: the Kings Beach Route and the Truckee Trolley Route. The Kings Beach Route operates November through April making ten runs per day, seven days a week between The Tahoe Sands Resort and Northstar-At-Tahoe from 7:00 AM to 5:30 PM. The Truckee Trolley operates November through April making ten routes per day, seven days a week between The Truckee Depot and Northstar-At-Tahoe from 7:00 AM to 5:30 PM. The Truckee Trolley also operates a service April through November making seven runs per day Monday through Saturday between the Truckee-Tahoe Airport and West End Donner Lake from 9:15 Am to 5:15 PM.

Bicycle: A Class II Bikeway (Bike Lane) will be constructed along SR 267 from Kings Beach to Brockway Summit. (Environmental Improvement Program for the Lake Tahoe Region, February 1998, Air Quality - p. 11) The implementation date of this project is scheduled for 2007. Because of the steep grade, bicycle speeds can approach those of motor vehicles; therefore, additional treated shoulder width should be provided in the design to provide increased sight distance and maneuverability with additional support from pavement markings and signs depicting "Bike Lane", "Share The Road", "Park Off Pavement" and "No Parking." All bikeway planning and design should be coordinated with local and regional agencies.

			Hi	ighway Log Ri	gnt of Way	Into	ormation	i
Average Median	Width: <u>0.00</u> N	<b>Aeters</b>	Average l	Lane Widths: 3,	66 Meters	Av	erage Shoulder Widths: 1.22 Meters	No. Lanes: <u>2</u>
			Tr	affic Analysis a	ınd Highwa	y In	formation	
<u>Year</u>	<u>AADT</u>	PeakHour	ly Volumes	V/C Ratio	LOS		Traffic Analysis Com	iments
2000	9,900	95	50	0.60	Е			
2010	13,400	1,3	00	0.81	Е			
2020	16,900	1,6	00	1.02	F		and the control of th	was the same of th
Terrain:	<u>Mount</u>	aino L	and Use:	Timberland & Url	<u>)an</u>		Future 20-Year Land Use: Timber	rland & Urban
% Traffic Gro	wth/Yr: <u>3</u>	.8% I	Daily Truc	k %:		1%	Total Accident Rate vs Statewide Average:	<u>104%</u>
Peak Period D	oir Split: 5	5 <u>5%</u> P	eak Perio	d Truck %:		3%	Fatalities + Injuries Acc Rate vs Statewide Avg:	<u>74%</u>

# **Future Right of Way Needs**

Near term right of way widths should be obtained or reserved in order to widen the existing 4-foot shoulders to 8 feet. Long term right of way widths should be obtained or reserved in order to construct a northbound truck climbing lane and 8-foot treated shoulders on north and southbound sides. Additional shoulder width may be necessary to accommodate parking and bike lanes.

# References

Route Concept and Development Report State Route 267, Caltrans April 1987

Draft North Tahoe Community Plans, Tahoe REegional PLanning Agency, October 1994

Environmental Improvement Program for the Lake Tahoe Region, Tahoe Regional Planning agency, February 1998

1997 California State Highway Log District 3, Caltrans

Statutes Relating to the California Department of Trasportation, Caltrans, 1996

State Higheway Inventory, Caltrans, June 1999

Placer County General Plan, Placer County, August 1994

Placer County Regional Transportation Plan, Placer County, January 1994.

Draft Lake Tahoe Basin Environmental Improvment Program Master Plan, Brown & Caldwell, May 23, 2000

# California Natural Diversities Database

The California Natural Diversities Database (CNDDB) is an application created to allow for the ability to perform an environmental assessment. The CNDDB was used in this report to depict environmental resources that exist along State Route 267. Known environmental resources are displayed on the map illustrated below and can be evaluated for potential impacts that may result from future projects. These data provide an initial assessment of environmental issues and concerns that will need to be addressed during project planning and development. Additionally, this information can be used to evaluate the feasibility of a project and for examining different alternatives. These are biological resources that may be threatened or endangered. Feasibility of a project probably would only be an issue when there would be a direct impact to a Federal or State endangered species. It can also provide a preliminary estimate of time and staff resources that may be needed to comply with environmental assessment and documentation.

The following map identifies the status of habitats and species found within 300 meters of centerline on the existing State Route 267. This information does not represent all possible environmental constraints that may exist. If a future project were proposed within the State Route 267 corridor, an environmental assessment would be required.

# Truckee Plumas Ivesia NEVADA COUNTY PLACER COUNTY PLACER COUNTY Tahoe Y ellow Cress Beach Lake Tahoe Benthic Stonefly Lake Tahoe

# GLOSSARY OF ABREBUIATION & TERMS

- **AADT:** (Average Annual Daily Traffic) denotes that the daily traffic is averaged over one calendar year.
- **ADT:** (Average Daily Traffic) is the average number of vehicles passing a specified point during a 24-hour period.
- **AIR QUALITY NON-ATTAINMENT:** identifies non-attainment status for CO, Ozone and PM10 within the subject air basin.
- **AQMD:** (Air Quality Management District) is a regional agency, which adopts and enforces regulations to achieve and maintain state and federal air quality standards.
- **BCAG:** (Butte County Association of Governments) is the designated Regional Transportation Planning Agency for Butte County that prepares, adopts and submits a Regional Transportation program to the California Transportation Commission.
- **BPM:** (Beginning Post Mile) the starting point of each segment as defined by the highway post mile markers. (See EPM).
- **CAPACITY ENHANCEMENTS:** are new facilities projects and operational improvements, which add through lanes.
- **CBD:** (Central Business District) is the downtown core area of a city, generally an area of high land valuation, traffic flow, and concentration of retail business offices, theaters, hotels, and service businesses.
- CEQA: (California Environmental Quality Act) is a statute that requires all jurisdictions in the State of California to evaluate the extent of environmental degradation posed by proposed development or project. A 1970 law, which required those state agencies, regulate planning and development activity, with major consideration for environmental protection. The basic purposes of CEQA are to:
  - a. Inform governmental decision-makers and the public about the potential significant environmental effects of a proposed planning of development activity.
  - b. Identify ways environmental damage can be avoided of significantly reduced mitigation.
  - c. Prevent significant, avoidable environmental damage by requiring changes in projects through the use of alternative measures when those measures are feasible and overriding consideration.

- d. Disclose to the public the reasons why a governmental agency approved a project in the manner the agency chose if significant environmental effects are involved.
- **CEQA REVIEW:** is the review of environmental and other documents pursuant to CEQA Statutes & Guidelines.
- CIP: (Capital Improvement Program) is a seven year program of projects to maintain or improve the traffic level of service and transit performance standards developed and to mitigate regional transportation impacts identified by the CMP Land Use Analysis Program, which conforms to transportation related vehicle emissions air quality mitigation measures.
- **CMA:** (Congestion Management Agency) is the agency responsible for developing the Congestion Management Program and coordinating a monitoring its implementation.
- **CMS:** (Congestion Management System) is required by ISTEA to be implemented by states to improve transportation planning.
- **CMP:** (Congestion Management Program) is an integrated approach to programming transportation improvements. This approach requires detailed consideration of the complex relationships among transportation, land use and air quality.
- **CO:** (Carbon Monoxide) is an odorless, poisonous, flammable gas that is produced when carbon burns with insufficient oxygen.
- COG: (Council of Governments) is a voluntary consortium of local government representatives, form contiguous communities, meeting on a regular basis, and formed to cooperate on common planning and solve common development problems of their area. COG's can function as the RTPA's and MPO's in urbanized areas.
- **CONCEPT:** is a strategy for future improvements that will reduce congestion or maintain the existing level of service on a specific route.
- **CONCEPT FACILITY:** is a highway facility type and characteristics considered viable with or without improvement within the 20 year planning period given financial, environmental, planning ad engineering factors.
- **CONCEPT LOS:** is the highest and best level of service that can be attained by the end of the 20 year planning period based on the Concept Facility. The Urban standard is "E" and the rural standard is "D".
- **CONGESTION:** is defined by Caltrans as: reduced speeds of less than 35 mile per hour for longer that 15 minutes.

- CTC: (California Transportation commission) is a body established by Assembly Bill 402 (AB 402) and appointed by the Governor to advise and assist the Secretary of the Business, Transportation and Housing Agency and the legislature in formulating and evaluating state policies and plans for transportation.
- **D/C:** (Demand Capacity Ratio) is the relationship between the demand for vehicle trips on a facility, versus the number of vehicle trips that can be accommodated on that facility.
- **DSMP:** (District System Management Plan) is a part of the system planning process. The DSMP is the district's long range plan for management of transportation systems in its jurisdiction.
- **EPM:** (Ending Post Mile) the ending point of each segment as defined by the highway post mile markers.
- **FREEWAY CAPACITY:** is the maximum sustained 15 minute rate of flow that can be accommodated by a uniform freeway segment under prevailing traffic and roadway conditions in a specified direction.
- **FTIP:** (Federal Transportation Improvement Program) also referred to as the TIP. This is a short-range action plan to the long range RTP. It identifies specifically what projects will be funded within the next 3-7 years.
- **FUNCTIONAL CLASSIFICATION:** Guided by federal legislation, refers to a process by which streets and highways are grouped into classes or systems, according to the character of the service that is provided, i.e., Principal Arterial, Minor Arterial Roads, Collector Roads, Local Roads.
- HCM: (Highway Capacity Manual) revised in 1994 by the Transportation Research Board of the National Research Council, the HCM presents various methodologies for analyzing the operation (see Level of Service) of transportation systems as freeways, arterial, transit, and pedestrian facilities.
- **HSR:** (High Speed Rail) are trains that operate at 125 MPH or above.
- **HOT:** (High Occupancy Toll) are new HOV lanes that allow single occupant vehicles access for a fee.
- **HOV:** (High Occupancy Vehicle) are a lane of freeway reserved for the use of vehicles with more than a preset number of occupants; such vehicles often include buses, taxis and carpools.
- **IRRS:** (Interregional Road System) is a series of Interregional state highway routes, outside the urbanized areas, that provide access to, and links between the states economic centers, major recreational areas, and urban and rural regions.

ISTEA: (Intermodal Surface Transportation Efficiency Act) Federal legislation and funding Program adopted in 1991. It provides increased funding and flexibility for multimodal transportation programs. Update: ISTEA expired on September 30, 1997. In December 1997, Congress passed and the President signed a sixmonth extension of the law, holding funding to current levels and keeping program structure and formulas intact. This extension expired on March 31, 1998, with an obligation deadline of May 1, 1998. On June 9, 1998, the President signed into law PL 105 178, the Transportation Equity Act for the 215 Century (TEA 21) authorizing highway, highway safety, transit and other surface transportation programs for the next 6 years. TEA 21 builds on the initiatives established in the 1990 ISTEA.

ITSP: (Interregional Transportation Strategic Plan) describes and communicates the framework in which the state will carry out its responsibilities for the Interregional Improvement Program (IIP). It also identifies how Caltrans will work with regional agencies to consult and seek consensus on the relative priority of improvements. The plan is evaluated in terms of its progress in carrying out its objectives, strategies and actions and updated accordingly on a biennial basis.

LOCAL AND REGIONAL LOS STANDARDS: identifies the level of service standard set by local and regional jurisdictions in general plans and congestion management programs.

LOS: (Level of Service) is a qualitative measure describing operational conditions within a traffic stream; generally described in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. LOS A represents free flow, LOS F represents gridlock.

**MODEL, MODE CHOICE:** Is a model used to forecast the proportion of total person trips on each of the available transportation modes.

MPO: (Metropolitan Planning Organization) according to U.S. Code, the organization designated by the governor and local elected officials as responsible, together with the state, for the transportation planning in an urbanized area. It serves as the forum for cooperative decision making by principal elected officials of general local government.

MTA: Metropolitan Transportation Authority (Metro Bus Lines) is a network of subways, busses, and railroads providing alternate transportation services to travelers.

NTN: (National Truck Network)

**MTP:** (Metropolitan Transportation Plan)

**MULTI MODAL:** Pertaining to more than one mode of travel.

**NATURAL DIVERSITY INFORMATION:** identifies special status of habitats and species found within 300 meters of centerline of the existing highway facility.

NHS: (National Highway System) consist of 155,000 miles (plus or minus 15 percent) of the major roads in the U.S. Included will be all interstate routes, a large percentage of urban and rural principal arterials, the defense strategic highway network, and strategic highway connectors.

**OZONE:** (O<sub>3</sub>) a form of oxygen with a peculiar odor suggesting that of weak chlorine. It is produced when an electrical spark is passed through air or oxygen.

**PEAK:** (Peak Period, Rush Hours): is defined as follows:

- The period during which the maximum amount of travel occurs. It may be specified as the morning (a.m.) or afternoon or evening (p.m.) peak.
- The period during which the demand for transportation service is the heaviest. (AM Peak period represents 6:30 a.m. to 8:30 a.m. and PM Peak period represents 3:00 p.m. to 6:00 p.m.)

PM: (Post Mile) is the mileage measured in statute miles from a county line or the beginning of a route to another county line or the ending of the route. Each post mile along a route in a county is a unique location on the State Highway System.

**PM10:** is particulate matter with a diameter of 10 microns of less.

**PM2.5:** is particulate matter with a diameter of 2.5 microns or less.

**PKm:** (Post Kilometer) is the mileage measured in kilometers from a county line or the beginning of a route to another county line or the ending of the route. Each post mile along a route in a county is a unique location on the State Highway System.

**PSR:** (Project Study Report) is the pre-programming document required before a project may be included in the STIP.

**RIP:** Regional Improvement Plan

RTIP: (Regional Transportation Improvement Program) is a list of proposed transportation projects submitted to the CTC by the regional transportation planning agency, as a request for state funding through the Flexible Congestion Relief (FCR) and Urban and commuter Rail Programs. The individual projects are first proposed by local jurisdictions (CMA's in urbanized counties), then evaluated and prioritized by the RTPA for submission to the CTC. The RT1P has a seven-year planning horizon, and is updated every two years.

RTP: (Regional Transportation Plan) is a comprehensive 20 year plan for the region, updated every two years by the regional transportation planning agency. The RTP includes goals, objectives, and policies, and recommends specific transportation improvements.

RTPA: (Regional Transportation Planning Agency) is the agency responsible for the preparation of RTP's and RTIP's and designated by the State Business Transportation and Housing Agency to allocate transit funds. RTPA's can be local transportation commissions, COG's, MPO's or statutorily created agencies.

**RURAL:** Used to describe areas lying outside the U.S. Census urban area boundary, less than 2,500 population (less than 5,000 population for Federal-Aid highway purposes).

**SACOG:** (Sacramento Area Council of Governments) is the Regional Planning Agency for the Sacramento Region, and is responsible for the preparation and adoption of a Regional Transportation Improvement Program (RTIP) for Sacramento, Sutter, Yolo, and Yuba counties.

**SHOPP:** (State Highway Operation and Protection Program) is a four-year program limited to projects related to State highway safety and rehabilitation.

**SIP:** State Improvement Plan

**SR:** (State Route) are highways within the state, which are distinctively designed to serve intrastate and interstate travel.

**SRTD:** (Sacramento Regional Transit District)

SRTP: (Short Range Transit Program) is a five year comprehensive plan required by the Federal Transit Administration for all transit operators receiving federal funds. The plans establish the operator's goals, policies, and objectives, analyze current and past performance, and describe short-term operational and capital improvement plans.

STIP: (State Transportation Improvement Program) is a list of transportation projects, proposed in RTIP and the PSTIP, which are approved for funding by the CTC. The STIP has two main funding components: the RIP and the IIP. Currently, after SB 45 the STIP was changed from a 7-year action plan to an interim 6-year plan. At the year 2000 and thereafter, the STIP will be a 4 year plan with updates every two years.

**STRAHNET:** (Strategic Highway Corridor Network)

TASAS: (Traffic Accident Surveillance and Analysis System) is a system that provides a detailed list and/or summary of accidents that have occurred on highways, ramps, or intersections in the State Highway System. Accidents can be selected by location, highway characteristics, accident data codes and combinations of the above.

TCR: (Transportation Concept Report) is a Route Concept Report (RCR) that analyzes a transportation corridor service area, establishes a twenty-year transportation planning concept and identifies modal transportation options and applications needed to achieve the twenty year concepts.

**TOT/MVM:** (Total Accidents per Million Vehicle Miles)

**TRAFFIC CONDITIONS:** are any characteristics of the traffic stream that may affect capacity or operations, including the percentage composition of the traffic stream by vehicle type and driver characteristics (such as the differences between weekday commuters and recreational drivers).

TRAFFIC FORECAST: Is a best estimate of the future conditions, demand and resulting volumes. A forecast also identifies whether or not the subject segment of a route is designated as being part of a system. National Highway System (NHS), Interregional Highway System (IRRS), Freeway/Expressway System, Scenic Highway, National Truck Network, Terminal Access Route for the National Truck Network, Strategic Highway Network (STRAHNET), Highways of Regional Significance.

TSM: (Transportation System Management) is that part of the urban transportation Process undertaken to improve the efficiency of the existing transportation system. The intent is to make better use of the existing transportation system by using short term, low capital transportation improvements that generally cost less and can be implemented more quickly than system development actions.

**URBAN:** is that area lying inside the U.S. Census urbanized boundary.

UTPS: (Urban Transportation Planning System) is a tool for multimodal transportation planning developed by the Urban Mass Transportation Administration (now Federal Transit Administration) and the Federal Highway Administration. It is used for both long and short-range planning, particularly system analysis and covers both computerized and manual planning methods. UTPS consists of computer programs, attendant documentation, user guides and manuals that cover one or more of five analytical categories: highway network analysis, transit network analysis, demand estimation, data capture and manipulation, and sketch planning.

V/C: (Volume/Capacity) is defined, as V/C is a ratio of number of vehicles operating to capacity for a traffic facility.